SYSTEM AND METHOD FOR EFFICIENTLY EXECUTING
SINGLE PROGRAM MULTIPLE DATA (SPMD) PROGRAMS

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ABSTRACT OF THE DISCLOSURE

A system and method is disclosed for efficiently executing single program multiple data (SPMD) programs in a microprocessor. A micro single instruction multiple data (SIMD) unit is located within the microprocessor. A job buffer that is coupled to the micro SIMD unit dynamically allocates tasks to the micro SIMD unit. The SPMD programs each comprise a plurality of input data streams having moderate diversification of control flows. The system executes each SPMD program once for each input data stream of the plurality of input data streams.

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